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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,674	09/26/2003	Todd Ames	2005.21	9815
29494	7590	03/07/2006	EXAMINER	
HAMMER & HANF, PC 3125 SPRINGBANK LANE SUITE G CHARLOTTE, NC 28226			VANATTA, AMY B	
			ART UNIT	PAPER NUMBER
			3765	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,674

Applicant(s)

AMES ET AL.

Examiner

Amy B. Vanatta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/26/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 012604, 092304.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 7 and 8 are objected to because of the following informalities: Claims 7 and 8 are duplicates of previous claims 3 and 4, respectively. It appears that claims 7 and 8 may contain an error in claim dependency, resulting in this duplication. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 5, 13, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ames et al (US 6,253,431).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by a banding jet 130. The tow is deregistered by roller assemblies 40, 60, 70 (see col. 4, lines 21-25 and col. 5, lines 1-4). Ames et al disclose a step of shaping the deregistered tow by means of device 240. A particulate is distributed onto the shaped tow by assembly 120, as claimed. Regarding the 35 U.S.C. 112, sixth paragraph "means plus function" limitations recited in claim 13, Ames discloses a

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means for spreading (130) which is an air banding jet, which is the same means for spreading disclosed by applicants. The means for deregistering the tow which is disclosed by Ames has the same structure for performing the same function as disclosed by applicant, that is, de-registering rollers (see roller assemblies 40,60,70 of Ames). The means for shaping the deregistered tow (240) disclosed by Ames is the same as the means for shaping disclosed by applicants (see page 11 of applicants' specification). A feeder 120 forms a means for distributing the particulate onto the tow. The feeder 120 of Ames appears to be equivalent to the particulate distribution apparatus disclosed as the "means for distributing" of applicants.

The tow line speed exiting from deregistration is determined by the speed of roll 72, and the tow line speed of the "particulate laden shaped tow" is determined by the speed of roll 92. Ames discloses that the ratio of the speed of roll 72 (i.e. the speed exiting from deregistration) to the speed of roll 92 (i.e. the speed of particulate laden shaped tow) is in the range of 1.8 to 2.2 (see col. 5, line 61 of Ames). This is within the claimed range of 1.8 to 3.0, as recited in claims 5 and 13.

Ames discloses that the tow is shaped to a substantially rectangular cross section (col. 6, lines 56-57) as in claim 15. Regarding claim 16, a liquid is applied to the tow by liquid additive assembly 80. The liquid additive assembly 80 is disclosed by Ames as comprising spray nozzles, disk applicators, or rotating brush applicators (see col. 5, lines 19-20), these being the same devices as the "means for applying liquid to the tow" as recited in applicants' 112, sixth paragraph limitation of claim 16 and as

disclosed by applicants in the specification (see applicants' specification, page 10, last three lines).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 7-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 4,468,845) in view of Hawkins (US 3,262,181).

Harris discloses a method for making a tow product, which forms an "absorbent composite" to the extent claimed, including steps of spreading a crimped tow in a direction perpendicular to the tow's travel (by banding jets 20,22), de-registering the crimped tow (col. 4, lines 26-28), and shaping the de-registered tow (by device 28; col. 5, lines 2-21). Harris discloses an apparatus as claimed including a means (banding jets 20,22) for spreading a crimped tow, a means (rollers 24,26) for deregistering the tow, and a means (28) for shaping the deregistered tow. Regarding the 35 U.S.C. 112, sixth paragraph "means plus function" limitations recited in claim 9, Harris discloses a means for spreading (20,22) which is a banding device, as is the means for spreading disclosed by applicants. The means for deregistering the tow which is disclosed by Harris has the same structure for performing the same function as disclosed by applicant, that is, de-registering rollers 24,26. The means for shaping the deregistered

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tow disclosed by Harris is equivalent to applicants' means for shaping, the means for shaping (28) of Harris performing the same function in the same way, and producing the same result as the "means for shaping" of applicants. Harris discloses that the line speed of the tow is about 300 to about 600 meters per minute (col. 8, lines 26-28), thus being greater than 190 m/min as in claims 1 and 9, and greater than 225 m/min as in claims 2 and 10. Regarding claims 3, 7, and 11, the tow is shaped to a substantially rectangular cross section (see rectangular shape of the shaping apparatus as disclosed in col. 2, line 55, and col. 4, line 62 through col. 5, line 18). Regarding claims 4, 8, and 12, a liquid (plasticizer from reservoir 94, which travels through pumps 90,92 to conduits 86,88 and then to applicator 72) is applied to the tow by a means for applying a liquid to the tow (72), which is equivalent to applicants' means for applying a liquid.

Harris does not disclose distributing a particulate onto the shaped tow by a means for distributing a particulate, as in claims 1 and 9. Both Harris and Hawkins disclose processes and devices for opening and treating crimped tow which is to be formed into tobacco smoke filter rods. Hawkins discloses that the particulate from feeder 70 is distributed onto the tow. Hawkins teaches that it is common to incorporate particulate additives into such tow before it is formed into filter rods in order to improve the properties of the tobacco smoke filters (col. 1, lines 15-19). Hawkins distributes the particulate onto the tow by feeder 70 while the tow is traveling through the blooming jet (col. 2, lines 4-17 and col. 3, lines 22-34). Particulate additives such as coloring agents, flavoring agents, and other substances are commonly added to such tow (col. 2, lines 11-17 of Hawkins). One having routine skill in the art would recognize that it would be

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advantageous to distribute particulate onto the tow of Harris by means of a feeder which connects to the blooming device 28 of Harris, in the manner shown by Hawkins, or by a conventional feeder which is provided just upstream of the blooming device of Harris, in order to provide the tow with agents such as coloring or flavoring agents before its formation into a filter rod. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to distribute particulate onto the shaped tow of Harris by means of a feeder, in order to supply the tow with coloring or flavoring agents to produce a more desirable tobacco filter product, such as taught by Hawkins.

6. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ames et al (US 6,253,431).

Ames et al ('431) disclose a method and apparatus as claimed, including a ratio of tow line speed exiting from deregistration to tow line speed of the particulate laden shaped tow in the range of 1.8 to 2.2 (see col. 5, line 61 of Ames). This is within the claimed range of 1.8 to 3.0, as recited in claims 5 and 13. Ames does not specifically disclose a value of 2.4 for this ratio, as recited in claims 6 and 14. It is within the ordinary skill in the art to determine the optimum value for this ratio through routine experimentation, depending upon the materials used and other controlled processing parameters. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a ratio of tow line speed exiting from deregistration to tow line speed of the particulate laden shaped tow of 2.4 in the method

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and apparatus of Ames et al, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 571-272-4983. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amy B Vanatta
Primary Examiner
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